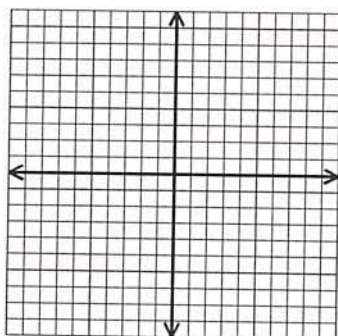


Name: _____
PC: Transformations of Functions

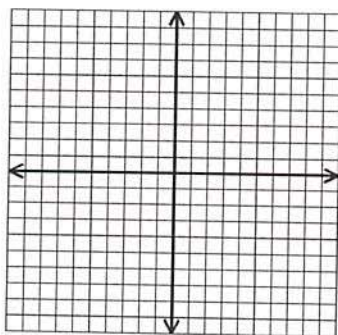
Date: _____

Do Now Activity

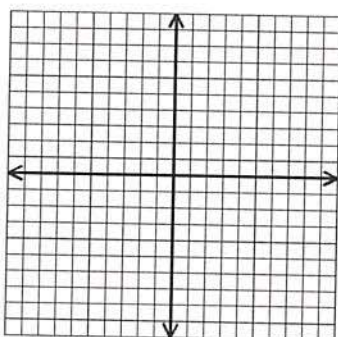
1. Graph $y = x^2$.



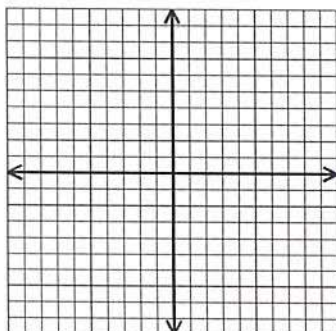
2. Graph $y = (x + 4)^2$ and describe how it is related to $y = x^2$.



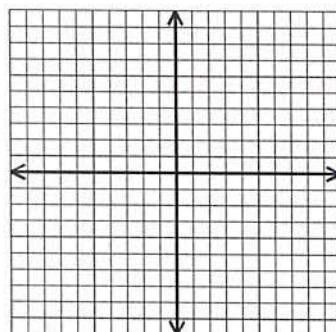
3. Graph $y = (x - 2)^2$ and describe how it is related to $y = x^2$.



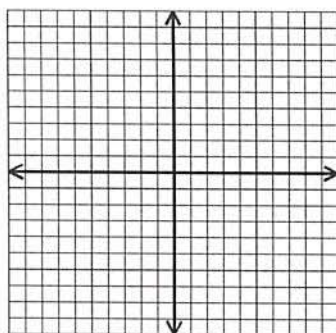
4. Graph $y = x^2 + 4$ and describe how it is related to $y = x^2$.



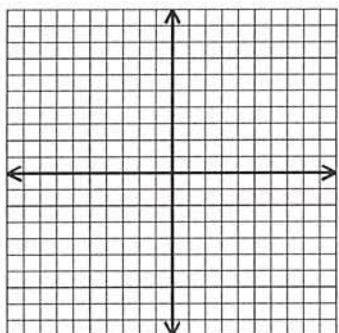
5. Graph $y = x^2 - 2$ and describe how it is related to $y = x^2$.



6. Graph $y = -x^2$ and describe how it is related to $y = x^2$.



7. Graph $y = (-x)^2$ and describe how it is related to $y = x^2$.



Use what you have discovered in questions 1 – 7 to fill in the following blanks:

- $f(x) + a$ is $f(x)$ shifted _____ a units
- $f(x) - a$ is $f(x)$ shifted _____ a units
- $f(x + a)$ is $f(x)$ shifted _____ a units
- $f(x - a)$ is $f(x)$ shifted _____ a units
- $-f(x)$ is $f(x)$ reflected over the _____
- $f(-x)$ is $f(x)$ reflected over the _____

